



{In Archive} KS PWSS APE report - Draft

Neftali Hernandez-Santiago to: Mary Mindrup, Diane Huffman

08/10/2007 12:27 PM

Cc: Rochelle Gibson, Monica Wurtz

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Mary, Diane,

Attached is the draft KDHE APE report for your review.



KS APE May 2007.doc

Thanks,

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**US Environmental Protection Agency  
Region 7**

**Kansas Department of Health and Environment  
Drinking Water Program  
Annual Performance Evaluation**

**Draft Report**

**May 7-11, 2007 On-Site Visit**

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## **Introduction**

An announcement of the Annual Performance Evaluation (APE) was mailed to the Kansas Department of Health and Environment (KDHE) on April 20, 2007. As outlined in that letter, the on-site evaluation of the Kansas drinking water program was conducted on May 7-11, 2007 at the KDHE offices in Topeka, Kansas.

Neftali Hernandez-Santiago and Rochelle Gibson with the Drinking Water Management Branch and the Water Enforcement Branch conducted the evaluation for the U.S. Environmental Protection Agency (EPA). Dave Waldo, Darrell Plummer and their staff with the KDHE, participated in or assisted EPA in conducting the evaluation.

The exit conference was held at 1:00 p.m. on May 11, 2007, at the KDHE's office. Dave Waldo and Darrell Plummer from KDHE, and Mary T. Mindrup, Rochelle Gibson, and Neftali Hernandez-Santiago from EPA were present at the exit conference.

## **Part I – PWSS Program Review**

### **A) Staffing**

David Waldo provided an updated organizational chart for the central office. The KDHE drinking water program has approximately 19.5 full time employees (FTEs). The program has a vacant position for an engineer and it is currently advertising the position. The program is hoping to get a new person very soon. The district offices have 9 to 10 FTEs each. These personnel are in charge of the field activities such as the sanitary surveys.

The KDHE is thinking on succession for people that are eligible to retire in the next couple of years, and would like to hire people before the person(s) retire in order to transfer knowledge and provide training to new individuals.

The KDHE believes current staff can manage the work load of existing rules (through arsenic), but will re-evaluate work load of new drinking water regulations such as the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR), the Long Term 2 Enhanced Surface Water Treatment Rule (LT2), and later rules once it adopts them.

The EPA thinks that KDHE staff is doing a very good job keeping up with the rules and seems that they are very knowledgeable of their particular rules and that are aware of issues at the system level.

### **B) Funding**

The federal money for the drinking water program has been very steady during the last couple of years. Due to inflation, federal allocations are paying for two less FTEs compared to previous years.

The KDHE expressed some concern about the money expended to maintain the database. Approximately \$200,000 was expended in 2006 on an update to the system and the estimated cost of maintenance will be about \$100,000 a year. They also mentioned that the system will have to be updated once more in order to incorporate new regulations. Because of the above considerations, Kansas will be using State Revolving Fund money to cover the maintenance cost for the system.

#### **C) Primacy**

Kansas is planning on requesting a one year extension for the LT2 and Stage 2 DBPR rules. These extension requests are due on January 4, 2008. Kansas is planning on submitting a primacy application for LT2, Stage 2, and the Ground Water Rule (GWR) by November 8, 2008.

The EPA requested additional assistance to implement the new rules on small communities. Currently, KDHE is providing information to small systems by checking their water monitoring results and advising of any waiver or certification for which they may qualify.

#### **D) Workplan**

As of the day of the review, KDHE was on target to meet most, if not all, the commitments stipulated in the work plan.

#### **E) PWS Inventory**

The populations of drinking water systems are updated every year using the Secretary of State Annual Report. If a system requests a change on population served, KDHE requires a certification from the system before any change is made in the Safe Drinking Water Information System (SDWIS). Also, KDHE has other tools to update the number of connections and administrative contacts etc. The KDHE is maintaining and updating the inventory as required and EPA has no comments.

#### **F) Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBPR)**

Kansas had 43 systems with Stage 1 DBPR maximum contaminant level (MCL) violations at the beginning of 2006. As of December 2007, 33 systems were in violation. All 30 systems, but Burlington (Burlington has built a new treatment plant), have some kind of an enforcement action in place. In addition, at the beginning of 2006, Kansas had 39 systems with treatment technique violations for Total Organic Carbon (TOC) removal, and 24 systems by the end of 2006. Although the KDHE has progressed addressing Stage 1 DBPR violations, EPA would like to see all systems returned to compliance in a timely manner.

Chlorine residuals are reported from the laboratory to the Topeka office in an electronic format. The KDHE then uses this information to determinate compliance. EPA has no recommendation for the chlorine residual reporting.

#### **G) Long Term 1 Enhanced Surface Water Treatment Rule (LT1)**

At the time of the review, Kansas had three systems with LT1 violations for lack of turbidity meters. These systems are under an administrative order from KDHE. This issue was identified by previous evaluation and EPA would like to see these systems achieve compliance.

Under the LT1, KDHE reviews the compliance reports for the surface water systems and makes the compliance determinations. Based on the information reviewed, it seems that the systems are achieving the turbidity and CT requirements.

Under the LT1 implementation, EPA recommends developing written procedures in place on how to process the reports submitted by the systems.

#### **H) Lead and Copper Rule**

In 2006 KDHE had 276 systems required to monitor, from those KDHE had 17 monitoring violations (these systems are rescheduled to sample in 2007). From the systems that completed the monitoring, 14 systems exceeded the action level (AL) (two systems for lead and 12 systems for copper). The City of Wichita was one of the systems that exceeded the lead action level and it is conducting the required public education.

Kansas has 76 systems in some level of corrosion control since the rule was promulgated. Eight of those systems have not achieved optimal corrosion control for copper.

Due to a reorganization of the KDHE laboratory, in order to balance the work load of the lead and copper analysis, some systems in Kansas will be conducting lead and copper analysis past the triennial reduces monitoring allowed under the rule. This means that some systems will be collecting samples one, two, or three years after required. Since EPA does not know how many systems are in this category, EPA would like to receive a list of system that will exceed the monitoring period allowed by the rule.

#### **I) Total Coliform Rule (TCR)**

Unfortunately, EPA could not conduct the review for TCR due to weather conditions that prevented some of the KDHE personnel to come to work.

Please provide an explanation of how the TCR results are handled including the need to schedule repeat samples, monitoring violations, MCL violations and enforcement actions.

#### **J) Sanitary Surveys**

The KDHE tracks the frequency of sanitary surveys (SS) using SDWIS. The KDHE uses the dates of the previous sanitary surveys to generate a list of systems that need a SS. The list is sent to the field offices so they can coordinate the site visits. The tracking system seems to be working very well.

Since the sanitary survey dates are reported to SDWIS, KDHE is already complying with a new reporting requirement effective on December 31, 2007 by a

memorandum signed by Cynthia Dougherty. The EPA did not find any deficiencies for sanitary surveys. However, EPA recommends reporting to SDWIS significant deficiencies discovered during a sanitary survey. This will provide more information.

The EPA reviewed 8 sanitary survey reports. One of the concerns is that the severity of findings seems to be determined by the judgment of the inspector and does not always follow the Sanitary Survey Site Observations submitted by KDHE in the primacy application. For example, some items considered significant deficiencies in the Sanitary Survey Site Observations were considered recommendations. The problem lays on the lack of enforceability for correction of recommended items that were indeed significant deficiencies. In other occasions the inspector classified with a higher severity item described in the Sanitary Survey Site Observations. However this second approach is acceptable because it is stricter. The EPA recommends following the Sanitary Survey Site Observations as approved. If the document changes, it must be re-submitted to EPA for approval.

#### **K) Nitrates**

Kansas has 15 systems with nitrates violations. From those four are under a Nitrate Strategy consent order.

Of the files reviewed, the monitoring results were in the file and the frequencies of samples were correct.

EPA recommends exploring a wellhead protection approach for the systems in and out of compliance for nitrates.

#### **L) Operator Certification**

The operator certification program has been working steady. Personnel seem to manage the work load. The program is currently working with a contractor to conduct a job analysis for the drinking water operators. Based on the job analysis results adjustments will be made to the program. The program is also working to review the exam questions for the operator exam. The program is also creating a CD similar to the Operator Basis CD from EPA but customized for Kansas.

One of the most significant changes to the program will be a change on the classification of ground water systems. The plan is to bring down the number of categories from IV to II. The reason is that many of the level III and IV groundwater system operators are getting training on things that are applicable to surface water systems only.

The program is concerned about the internal/external requirements for review. They believe that the requirements are unique for the operator certification program and not to the drinking water program as a whole. The EPA believes that the Kansas operator certification program is complying with the review requirements but future guidance from EPA Headquarters (HQ) will help clarify what constitutes an internal/ external review of the program.

The EPA recommends the program report recommendations of any review conducted within the annual report. The EPA also recommends evaluating the impact of new rules in order to evaluate training needs for operators.

#### **M) Capacity Development**

The capacity development program has been focused on the implementation of KanCap or the board member training and is working to start with the implementation of the Rate Check-up/CapFinance programs to assist small systems in revising their rates and to create budgets plans and strategies for their system.

#### **N) Radionuclides**

The KDHE is expecting to have more radionuclides MCL violations than what was originally anticipated (approximately 20). Initial monitoring ends on December 31, 2007. As of the day of the review, Kansas had approximately 9 systems exceeding the MCL for one or more radionuclides.

The EPA recommends KDHE provide assistance to these systems in looking for solutions to their radionuclide issues.

#### **O) Arsenic**

Initial monitoring ends on December 31, 2007 for ground water systems. Kansas has approximately 20 systems that are exceeding the Arsenic MCL. The EPA recommends KDHE provide assistance to these systems in looking for solutions to their arsenic issues.

#### **P) Public Notification Rule**

Under the Public Notice Rule for Tier 1 and Tier 2 public notices, it was not clear how KDHE is measuring the time frames of notification. For neither instance it was not clear when the clock started for the 24 hour or 30 day public notice requirement.

The EPA recommends to have written procedures that specified when the time starts running in order to make determinations for compliance with the time frames established by the rule.

#### **Q) Consumer Confidence Report Rule (CCR), Nitrate monitoring and Phase II / V monitoring**

The EPA thinks the CCR, Nitrate monitoring and Phase II / V monitoring are implemented satisfactory and EPA has no recommendations here.

## Part II – Drinking Water Enforcement Review

The Kansas Public Water Supply Program enforcement evaluation consisted of discussions with KDHE staff and a review of selected public water system files. The KDHE had not made any changes in 2006 of its enforcement practice. In 2006, as result of the 2005 enforcement review, EPA recommended that KDHE update its official enforcement policy and develop escalation policies. The KDHE has an escalation policy for microbiological contaminants but not for other contaminants. At the time of this review, KDHE had not updated its enforcement policy nor developed additional escalation policies. In 2006, KDHE issued 24 Directives (a non-formal enforcement action), 19 Consent Orders, one Administrative Order, and six Administrative Orders with Penalty.

In general, the review indicated that KDHE maintains good documentation in the files, including such items as emails and memos about meetings or discussions with water systems, and has performed well in notifying systems of violations and tracking compliance status. Additionally, KDHE performs proactive activities such as sending monitoring reminder letters helping water systems avoid monitoring violations. The KDHE staff was very helpful and responsive to obtaining requested information. The coordination of individual compliance officer activities to determine the need for enforcement is done through weekly staff meetings and compliance officer interactions. The KDHE uses databases to the full extent and is able to generate reports assisting them in tracking violations and water system compliance status.

The enforcement file review consisted of a review of 15 public water systems selected to represent a range of violation types, water source, and population sizes. Of the public water systems selected, 13 were community water systems ranging in population of 87 – 2,707, and two were transient non-community water systems. Of the 13 community water systems, three purchase all water from another public water system, three have surface water sources, and seven have ground water sources. The two transient non-community water systems have ground water sources. Although the review covered small systems, those with a population of 3,300 or less, SDWIS data indicates that most violations occurred at small systems rather than medium or large sized systems.

Of the 13 community water systems, five were reviewed due to violations of the Stage 1 DBPR, two of these five also had violations of the LT1. Five public water systems were reviewed due to nitrate levels which exceeded the MCL, two public water systems had incurred violations for exceeding the MCL for a radionuclide, and one community water system had TCR violations. Both transient non-community water systems were selected due to TCR violations.

Redacted non responsive

Of the 15 files reviewed, the KDHE had taken a formal enforcement action with five of the water systems ( [REDACTED] Pretty Prairie,

[REDACTED]  
[REDACTED]  
[REDACTED]



[REDACTED]

A complete summary of the review findings for each water system appears in Attachment 2.

#### **A) Nitrates**

Enforcement discussion primarily focused on nitrate issues. In March 1997, the KDHE entered into an agreement, titled Kansas Nitrate Strategy (Strategy), with EPA to establish an approach KDHE would take to address community public water systems which have violations of the nitrate MCL. The terms of the Strategy were then agreed upon between KDHE and the water system through a Nitrate Consent Order, which expired seven years after signature. In 2005, EPA evaluated the implementation of the Strategy and subsequently determined to discontinue its use. The KDHE was informed of this determination in July 2006, and was requested to submit a plan to phase out the Strategy and transition to a method in which timely compliance would be obtained. The KDHE responded in February 2007 that four Nitrate Consent Orders remained in place, three expiring in 2010 and one expiring in 2011. The KDHE intends to honor the terms of those Orders until their expiration.

The KDHE proposed that community water systems incurring nitrate MCL violations in two out of three consecutive quarters will receive a Directive from KDHE requiring the system to prepare an engineering report identifying options and cost estimates for achieving compliance. The KDHE will then review the options and cost estimates and negotiate a schedule to complete the best option. Discussions during the review indicated that KDHE would not require the water systems to implement options unless the water system is consistently exceeding the nitrate MCL four consecutive quarters.

Information provided by KDHE indicates 17 water systems had entered into a Nitrate Consent Order. Nitrate Consent Orders for four water systems remain in place, one Order has expired while the system has not achieved compliance (Pretty Prairie), and 12 Orders had been rescinded (indicating that the system had nitrate results less than the MCL in four consecutive quarters). Although the Nitrate Consent Order with Pretty Prairie expired in 2003, KDHE continued to enter the 1996 Order in SDWIS as an enforcement action taken to address those violations occurring after the 2003 expiration.

Based on information provided by KDHE during the review, 15 community water systems had nitrate MCL violations in 2006. Populations ranged from 65 to 1,984 people. Two of these systems are consecutive water systems. Of these 15 water systems, three systems (Argonia, Harper Co. RWD 4, and Pretty Prairie) had nitrate MCL violations in two consecutive quarters, one system (Arlington) had MCL violations in three consecutive quarters, and two systems (Green Acres Mobile Home Court, and Osborne Co. RWD 1A) had MCL violations in four consecutive quarters. All of these nitrate results were less than 20 mg/L. Nine of the 15 community water systems had MCL violations in 2005 (Argonia, Arlington, Brewster, Harper County RWD #4,

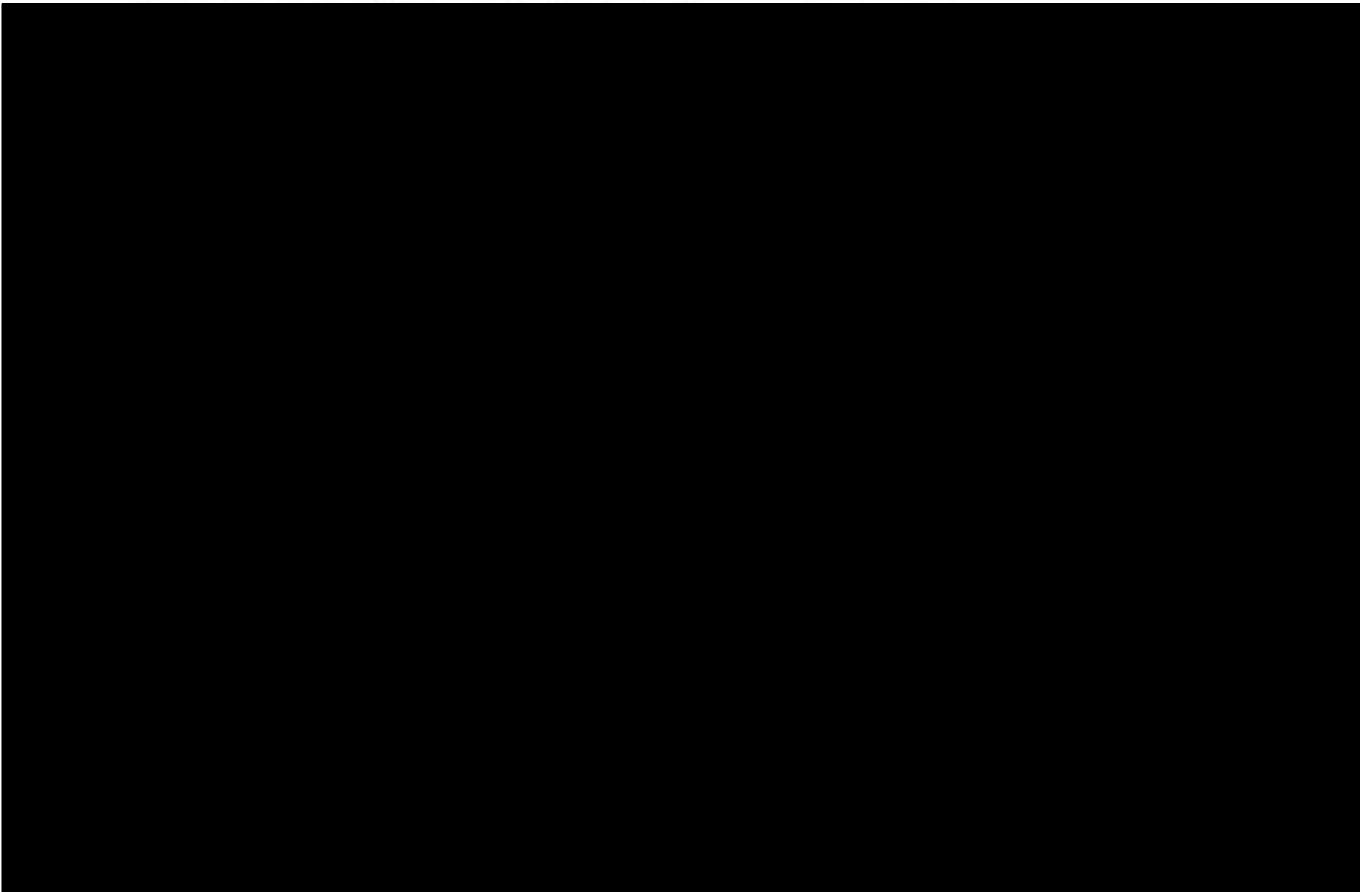
Norwich, Osborne County RWD #1A, Pretty Prairie, Rooks County RWD #1, and Woodston).

The situation with many of these water systems is that they experience nitrate MCL violations in one quarter, or two non-consecutive quarters in a year, and have nitrate results below the MCL level the remainder of the year. Systems may then experience the same conditions the next year. Of the files reviewed, two water systems (Kirwin, Pretty Prairie) had installed new wells in the past due to nitrate MCL violations, but then experienced MCL exceedances from the new wells.

A system is returned to compliance after two consecutive quarters below the MCL. After four consecutive quarters below the MCL, monitoring can be reduced to annually.

Because KDHE requires all water systems to disinfect with chlorine, they do not require systems to sample for nitrites. The chlorine oxidizes the nitrites so there is not a need to monitor.

No water systems are currently using wellhead protection as a means to achieve compliance. If KDHE considers using wellhead protection as a means for systems to achieve compliance, EPA recommends that systems have a means of evaluating the effectiveness of the Wellhead Protection Program. Redacted non responsive





[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

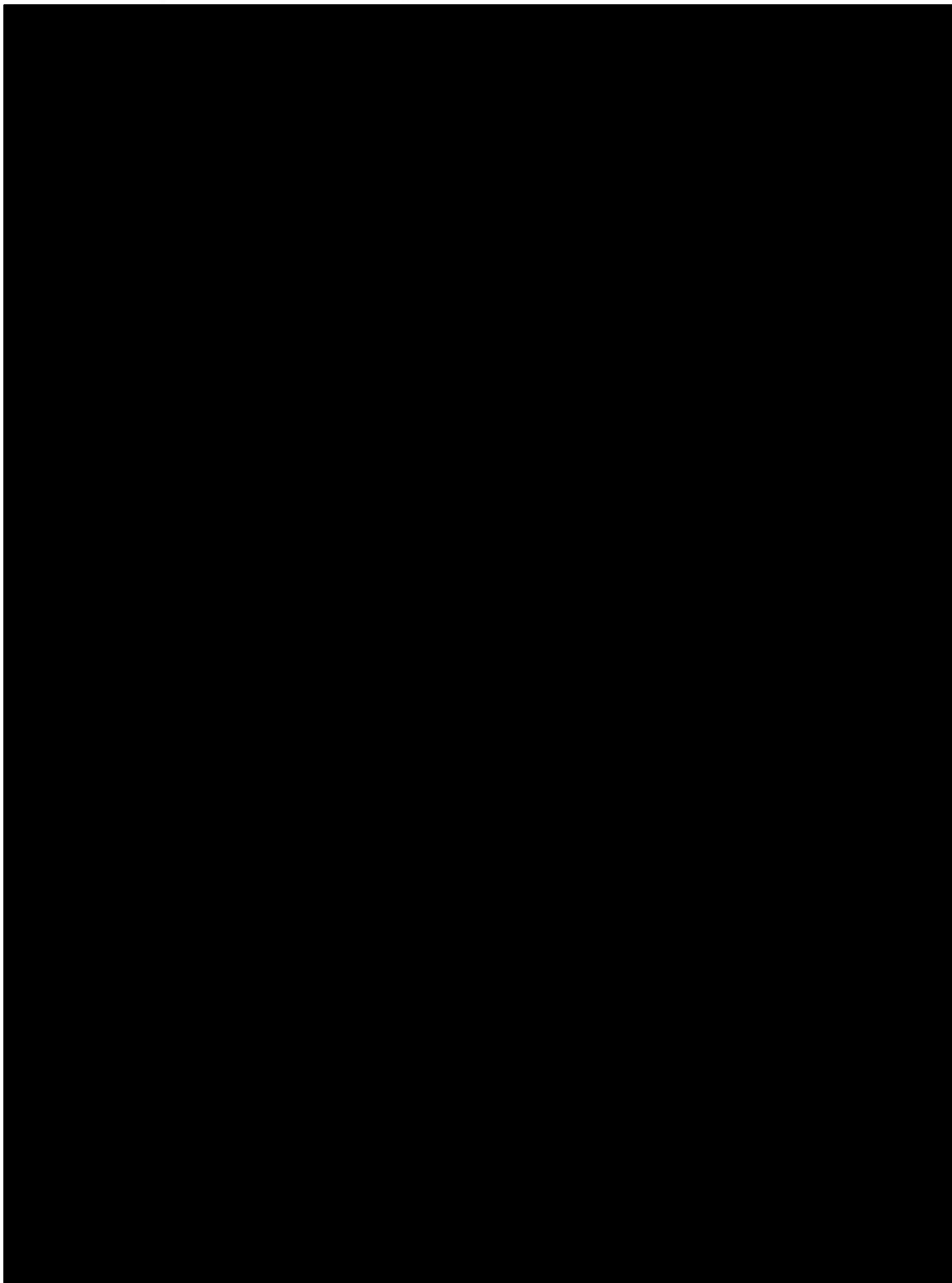
[REDACTED]

technical assistance level.

#### **F) Public Notification**

The file review indicated that notification of a violation was generally issued by KDHE within 30 days from when each violation occurred. Additionally, KDHE sends information regarding the public notice requirements and certification of delivery of public notice form. The KDHE uses SDWIS to track when public notification was performed, and when the certification of delivery form was received. The KDHE staff indicated that a public notification compliance report is generated from SDWIS once per month to determine if public notice certificates of delivery are missing or late in being received. However, it was not clear when the timeframe for tracking when public notice was to be made was to begin. If the public notification was not performed within the required timeframe, or the certificate of delivery was not received within the required timeframe a public notice violation should be assessed.

The review of files for Pretty Prairie, [REDACTED] indicates that public notification of acute nitrate violations may not be performed as required. Each of these water systems reported to conduct public notification by mail and by newspaper. The timeframe from the date of the notification of violation and the public notification ranged from three to nine days. Violation of the MCL for nitrate requires a Tier 1 public notification. This level of public notification requires that water systems provide public notice within 24 hours after the system learns of the violation and to use, at a minimum, one or more of the following forms of delivery: 1) Appropriate broadcast media; 2) Posting; 3) Hand delivery; or 4) Another method approved in writing by the primacy agency. Mailing is not an appropriate method of delivery for this type of public notice. The EPA recommends that the type and timeframe for public notice be monitored more closely to ensure that it complies with the applicable regulations, and a written protocol be put into place.





















[REDACTED]

Pretty Prairie, KS2015501

The Pretty Prairie public water system serves a community of 600 people. The water system has historical nitrate violations from 1995 through 2006. Historically, the water system installed new wells in response to a 1994 Administrative Order issued by EPA. Once in operation, the new wells exceeded the nitrate MCL. The KDHE then issued a Nitrate Consent Order to the water system in October 1996. That Order expired in 2003. No other formal enforcement action has been taken to date. According to SDWIS data, the system was in violation of the nitrate MCL for three quarters in 2003, three quarters in 2004, two quarters in 2005, and two quarters in 2006. The last two quarters of 2006 the system incurred nitrate monitoring violations. Although the Order expired in 2003, KDHE continued to enter the 1996 Order in SDWIS as an enforcement action taken to address those violations occurring after the 2003 expiration.

Additionally, the water system took a quarterly nitrate sample in January 2006, but did not submit that sample result to KDHE until March 29, 2006. The result indicated an MCL exceedance. The KDHE notified the system of non-compliance in a letter dated March 30, 2006, and notified the system to issue public notification within 24 hours, and return the certificate of delivery by April 12, 2006. The public notice certificate of delivery dated April 14, 2006 and received at KDHE April 17, 2006, indicated notice was distributed by mail on April 5, 2006. The system incurred a public notice violation for the time period April 1 through April 5, 2006.

[REDACTED]

[REDACTED]

